

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1-19 (Cancelled)

20. (Previously Presented) A centrifugal type hollow fiber membrane module production apparatus for bonding and fixing together at least one end of a hollow fiber membrane and a module case, in which the hollow fiber membrane is stored, with a potting resin utilizing a centrifugal force, with the production apparatus comprising:

a fixing jig that supports a potting working part of an end of the hollow fiber membrane module, and that is mounted for rotation about an axis to impart a centrifugal force to the jig;

a rotation driver for rotating the jig about the axis to impart the centrifugal force to the jig;

a heating device and a temperature detector disposed on the fixing jig; and

a controller connected to the heating device and to the temperature sensor to control a heating capacity of the heating device based on a calculated value of a difference between a temperature of the fixing jig detected by the temperature detector and a preliminarily set setting temperature of the fixing jig.

21. (Previously Presented) The production apparatus for a hollow fiber membrane module according to claim 20, wherein a temperature accuracy of the controller is in a range of  $\pm 4^{\circ}\text{C}$  to the setting temperature.

22. (Previously Presented) The production apparatus for a hollow fiber membrane module according to claim 20, wherein the rotation driver causes the centrifugal force applied to the potting working part to be in a range of 10 to 100 times the force of gravity.

23. (Previously Presented) The production apparatus for a hollow fiber membrane module according to claim 20, wherein the heating device and the temperature detector are supported on the fixing jig in a closely thermally contacted state.

24. (Previously Presented) The production apparatus for a hollow fiber membrane module according to claim 20 or claim 23, wherein the heating device is an electric type heater.

25. (Previously Presented) The production apparatus for a hollow fiber membrane module according to claim 20, including a fluid sealed in a wall of the fixing jig, and comprising a portion of the heating device.

26. (Previously Presented) The production apparatus for a hollow fiber membrane module according to claim 20, wherein the production apparatus further comprises a rotation controller connected to the rotation driver to control a rotational frequency of the fixing jig.

27. (Previously Presented) The production apparatus for a hollow fiber membrane module according to claim 20, wherein: the fixing jig comprises at least two block members; and the controller includes a temperature control arrangement to control the respective block members at different respective temperatures.

28. (Previously Presented) The production apparatus for a hollow fiber membrane module according to claim 20, wherein the production apparatus further includes a pressure reducing mechanism to provide an environment for the potting working part of a decompressed condition of 500 hPa or less.

29. (Previously Presented) A centrifugal type hollow fiber membrane module production apparatus for bonding and fixing together at least one end of a hollow fiber membrane and a module case, in which the hollow fiber membrane is

stored, with a potting resin utilizing a centrifugal force, said production apparatus comprising:

- a fixing jig that supports a potting working part of an end of the hollow fiber membrane module, and that is mounted for rotation about an axis to impart a centrifugal force to the jig;

- a rotation driver connected to rotate the jig about the axis to impart the centrifugal force to the jig; and,

- a pressure reducing mechanism that provides an environment with a decompressed condition of 500 hPa or less for the potting working part.

30. (Currently Amended) A method for producing a hollow fiber membrane module, comprising the steps of:

- ~~providing~~ using the production apparatus for the hollow fiber membrane module according to claim 20;

- using a thermoplastic resin as the potting resin;

- calculating the difference between the temperature of the fixing jig detected by the temperature detector and the preliminarily set setting temperature of the fixing jig; and,

- bonding and fixing the end part of the hollow fiber membrane and the module case while controlling the heating capacity of the heating device based on the calculated difference value.

31. (Previously Presented) The method for producing a hollow fiber membrane module according to claim 30, wherein the potting resin comprises fine particles of a thermoplastic resin; and the step of bonding and fixing includes filling the potting working part with a mixture of the fine particles of the thermoplastic resin and a liquid.

32. (Previously Presented) The method for producing a hollow fiber membrane module according to claim 31, wherein the potting resin is a polyolefin based resin.

33. (Currently Amended) The method for producing a hollow fiber membrane module according to claim 30 or claim ~~31~~, 32, wherein the potting resin is a polyethylene resin.

34. (Previously Presented) The method for producing a hollow fiber membrane module according to claim 30, wherein the step of bonding and fixing includes utilizing a filling ratio of the hollow fiber membrane to a volume of the potting working part of between 20% or more and 60% or less.

35. (Previously Presented) A method for producing a hollow fiber membrane module, comprises the steps of:

using the production apparatus for the hollow fiber membrane module according to claim 20;

using a thermoplastic resin as a component of the hollow fiber membrane;

calculating the difference between the temperature of the fixing jig detected by the temperature detector and the preliminarily set setting temperature of the fixing jig; and,

bonding and fixing the end part of the hollow fiber membrane and the module case while controlling the heating capacity of the heating device based on the calculated difference value.

36. (Previously Presented) The method for producing a hollow fiber membrane module according to claim 35, wherein the component of the hollow fiber membrane is a polyolefin based resin.

37. (Previously Presented) The method for producing a hollow fiber membrane module according to claim 36, wherein the component of the hollow fiber membrane is a polyethylene resin.

38. (Previously Presented) The method for producing a hollow fiber membrane module according to claim 35, wherein the step of bonding and fixing

includes utilizing a filling ratio of the hollow fiber membrane to a volume of the potting working part of between 20% or more and 60% or less.

39. (Previously Presented) The centrifugal production apparatus for a hollow fiber membrane module according to claim 29, wherein the production apparatus further includes:

a heating device and a temperature detector disposed on the fixing jig; and,  
an output controller having an input connected to the temperature detector and an output connected to the heating device to control an output of the heating device based on temperature information of the fixing jig detected by the temperature detector.